

Report
**Evolution of the publications in high impact journals in the relevant
research fields**

Deliverable D5.1 - Month 2

Level of dissemination - Public

Lead beneficiary - Jozef Stefan Institute



Innovation Hub for Surface and Colloid Biology Research

Grant Agreement ID 952379

Table of Contents

- 1. Aim.....3
- 2. Methods.....3
- 3. Results.....3

1. Aim

In order to monitor the contribution of the Twinning project on the development of the Colloid biology research field at the JSI one of the criteria of the successful action is the increase of the rate of the publishing in the high impact journals. According to the deliverable, we monitored 3 years before the SurfBio project signature of the grant agreement.

This is the Key Performance Indicator that measures the evolution (compared to a reference period of three years prior to the signature of the grant agreement) in % of the peer-reviewed publications in high impact journals (in the top 10% impact ranked journals) in the given research fields of the research organisations (on average) in low-performing countries funded under Twinning.

2. Methods

Since the colloid biology is a new field and it involves different disciplines including physics, material science, biology etc., we used different combinations of keywords to find publications, which are according to our best knowledge somehow relevant for the colloid biology field, namely:

1. Polyelectrolyte+biology
2. Nanoparticle+biology
3. biosensor
4. bacteria+engineering+material
5. antimicrobial+material+engineering
6. Colloid+bacteria
7. Antibacterial+material

In our search of publication data we used SciVal tool¹ at Elsevier portal where we included all publication published by the researchers at the JSI and were published in the top 10% SCI indexed journals.

3. Results

According to our search we observed that in the last three years there were published 37 research articles which satisfy our criteria (see above). Per year there are between 11 and 15 publications (Fig. 1). The most relevant publication covered by the most of the keywords is: Rijavec, T., Zrimec, J., van Spanning, R., & Lapanje, A. (2019). Natural Microbial Communities Can Be Manipulated by Artificially Constructed Biofilms. *Advanced Science*, 6(22), 1901408.

Therefore, up to now this publication can be also a model for further description of the field.

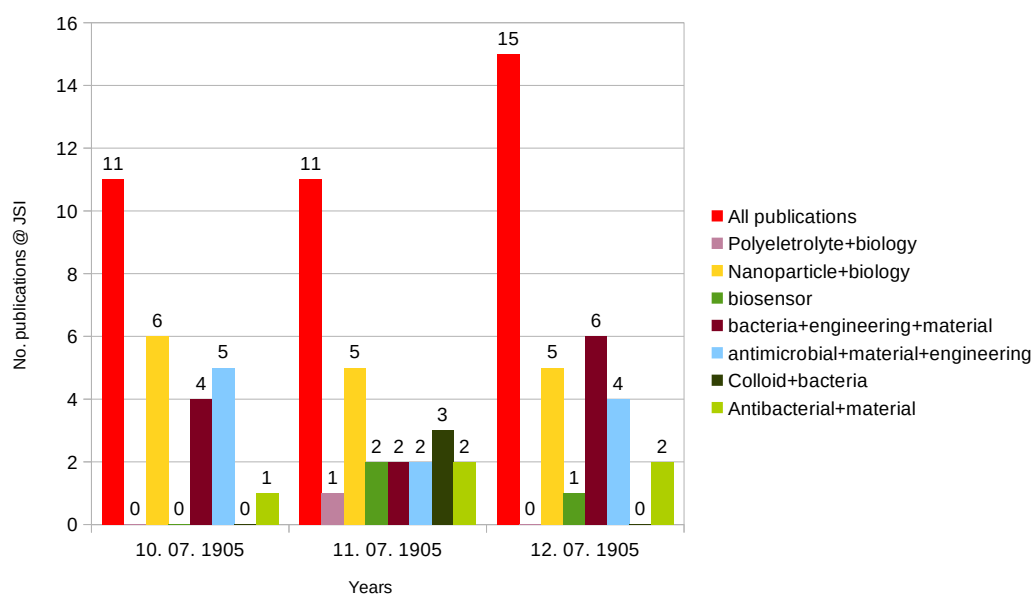


Figure 1. Number of publications per year published in different fields relevant for the colloid biology research field. There are also included number of publications per each of the used keywords.

Appendix – list of publications per keyword

Upon request we also prepared an odt file showing data which we used in our analysis. The data is divided according to the method of sorting. Each of the sheets represent different levels of sorting and purification of data.